



Dart Hawkesbury
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D206-642-541
Job Sheet 167711-A



Part No: D206-642-541

Job Qty: 1 ea

Part Name: Repl.Skid.,High Gear,Std Wearplates Fits LH/RH, DART Tri-Bag Float Comp.



Part Weight: 0 lbs

Status: Scheduled

Priority: High

Job Created: 11/6/17

Job Tracking No:

Due Date: 12/8/17

Created By: Victoria Michaud-Febrille

Type: SOLD

Description:

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	1 Ea		12/7/17	0.00	0.00	Start Up Skid tubes		
110	Skid tubes	1 pcs		12/7/17	0.00	2.17	Skid tubes		DAS BL
114	QC	1 pcs		12/7/17	0.00	0.00	QC5		38 DAS
116	QC	1 pcs		12/7/17	0.00	0.00	QC10		38
120	HandFinish	1 pcs		12/7/17	0.00	0.68	HandFinish1		2017-11-30 JSC
130	QC	1 pcs		12/7/17	0.00	0.00	QC7		BL
150	Skid tubes	1 pcs		12/7/17	0.00	2.08	Skid tubes		I.Y.
160	QC	1 pcs		12/7/17	0.00	0.00	QC5		BL
170	Skid tubes	1 pcs		12/7/17	0.00	2.17	Skid tubes		M.G.S., BL
180	QC	1 pcs		12/7/17	0.00	0.00	QC5		38
190	Skid tubes	1 pcs		12/7/17	0.00	2.75	Skid tubes		BL 2-89
200	QC	1 pcs		12/7/17	0.00	0.00	QC5		
210	QC	1 pcs		12/7/17	0.00	0.00	QC10		
220	HandFinish	1 pcs		12/7/17	0.00	0.45	HandFinish2		
230	SprayPaint	1 pcs		12/7/17	0.00	0.40	Spray Paint		
240	QC	1 pcs		12/7/17	0.00	0.00	QC14		
244	HandFinish	1 pcs		12/7/17	0.00	0.50	HandFinish3		
246	QC	1 pcs		12/7/17	0.00	0.00	QC3		
250	HandFinish	1 pcs		12/7/17	0.00	0.45	HandFinish4		
260	QC	1 pcs		12/7/17	0.00	0.00	QC5		
270	HandFinish	1 pcs		12/8/17	0.00	0.68	HandFinish4		
280	QC	1 pcs		12/8/17	0.00	0.00	QC5		
285	DC	1 pcs		12/8/17	0.00	0.00	DC		
290	Packaging	1 pcs		12/8/17	0.00	0.00	Packaging3		
300	QC21-FG	1 Ea		12/8/17	0.00	0.00	QC21		

Part Op 110 - ****VERIFY AND INSPECT THE MATERIAL PRIOR TO USE**** 1- remove fwd indexing ridge as per dwg D3274.

Descriptions: Prepare for welding 2- weld fwd cap as per dwg D3274 and QSI004 AR Aluminum Rod Batch: 113658/137132 3- grind fwd cap weld on top surface only 4- Cut AFT end of tube at 170.9" as per dwg D3274 and deburr end. 5-Drill Aft cap pilot hole using DT8025 6 -Cleco DT8025 in position and install pilot hole drill Jig DT8742A,B,C,D and DT8742. Drill 3/16" pilot holes as per Dwg D3274 7 -Remove inner indexing ridge on aft end of skid tube as per Dwg D3274 scribe batch # 8 -Open aft end cap holes to Ø0.208" as per Dwg D3274. Deburr aft end.

150 - 1-Open Ø0.313" and 0.375" crossbolt spacer holes as per Dwg D3274 2-Deburr crossbolt spacer holes as per Dwg D3274 and blow out chips from inside the tube 3-Bond web in place as per Dwg D3274 & QSI 015. (Adhere for 12 hours)

170 - 1-Bend AFT end of tube using bend prog. D3274 AFT as per dwg D3274. Install drop pins in crossbolt spacer holes to maintain web position. 2- DRILL PILOT HOLES FOR WEARPLATES USING D3274-1T2 OPEN HOLES TO .297". Deburr 3-DRILL TOE PIN HOLE .640" DIA AS PER DWG USING DT8935 FWD END OF TUBE DEBURR INSIDE OF

DART
AEROSPACE
S0144-15



Repl. Skid., High Gear, Std Wearplates Fits LH/RH, DART
Tri - Bag Float Comp.

PART NO:

Revision:

Operation:

Change No:

D206 - 642 - 541

Start up Operation

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K64 1K7
CANADA
TEL: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Mfg Date: 11/27/17

Job No: 167711-A

HOLE AS NECESSARY (DO NOT ENLARGE HOLES) REMOVE ANY FOREIGN OBJECTS INSIDE OF TUBES 4- Countersink crossbolt spacer holes as per Dwg D3274 5- prepare for welding

190 - 1-Insert D2649 & D3275-1 crossbolt spacers. Weld as per QSI 004 and Dwg D3274. Remember to back drill each hole before welding the other side. Use aluminum rod 3-Grind cross bolt welds flush as per Dwg D3274. ****INSPECT FOR PIN HOLES IN WELD**** 4-Counterbore 5/16" x 0.750" deep as per Dwg D3274 and deburr. *A/R 136158*

220 - Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch

230 - Make sure Nut Plate Thread is protected using paint screw,. 1- PRIME AS PER DWG AND QSI 005 4.2 PRIMER PRC DESOTO 515X349 BATCH: _____ 2- PAINT WHITE AS PER DWG AND QSI 005 4.2 PAINT BATCH: _____

250 - 1-Install Nut Plate as per Dwg D3274. Apply LPS-PROCYON to Nut Plate and rivets.

260 - Inspect Nut Plate & Inserts

270 - 1-Install wearpads as per Dwg D3274. 2-Install ring as per Dwg D3274 3-Inspect for foreign objects as per QSI 024 4-Install Aft Cap and seal with Sikaflex. Clean excess adhesive.

285 - Photocopy bluefile & type labels per PPP D206-642-541 CHG005

290 - Location : FG073

300 - 4-Counterbore 5/16" x 0.750" deep as per Dwg D3274 using DT10280 and deburr.

Job Allocations

Operation	Component Part	Required	Inventory	Allocated	Std Qty
90-Start up Operation	D3274-041BENT <i>6150249</i>	1	5	0	0
	D3285-1 <i>153501</i>	1	5	0	0
150-Skidtubes	D3282-041 <i>150311</i>	1	8	0	0
190-Skidtubes	D2649 <i>F153814</i>	12	130	0	0
	D3275-1 <i>5051647</i>	12	60	0	0
250-HandFinish	ALS4-1032-130	78	957	0	0
	CCR264SS3-3	2	250	0	0
	CR3212-4-03	2	223	0	0
	D3415-041	1	23	0	0
270-HandFinish	AN3C4A	80	520	0	0
	AN4C5A	1	29	0	0
	D2646	1	149	0	0
	D3413-1	1	19	0	0
	D3537-1	9	64	0	0
	D3537-3	1	22	0	0
	D3672-1	2	1,769	0	0
	D4956-15	1	8	0	0
	D4956-23	1	4	0	0
	D4956-35	1	6	0	0
	D4956-39	1	9	0	0
	NAS1149C0332R	80	3,888	0	0
	NAS1149C0463R	1	130	0	0

Part Specifications

Specifications could not be found.

Qty -041	Qty -043	Qty -045	Part Number	Description
X			D3274-041	SKIDTUBE ASSEMBLY
	X		D3274-043	SKIDTUBE ASSEMBLY
		X	D3274-045	SKIDTUBE ASSEMBLY (FOR PHI)
1	1	1	D2600-1-240	EXTRUSION
1	1	1	D2646	AFT CAP
12	12	12	D2649	CROSS BOLT SPACER
12	37	12	D3275-1	CROSS BOLT SPACER
1	1	1	D3282-041	FLOAT WEB
1	1	1	D3285-1	CAP
1	1	1	D3413-1	RING
1	1	1	D3415-041	NUT PLATE
9	9		D3537-1	WEARPAD
		1	D3537-11	WEARPAD
1	1		D3537-3	WEARPAD
		9	D3537-9	WEARPAD
2	2	2	D3672-1	WASHER
1	1		D4956-15	WEARSHOE
1	1		D4956-23	WEARSHOE
1	1		D4956-35	WEARSHOE
1	1		D4956-39	WEARSHOE
78	78	40	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, AELS-1032-130)
80	80	42	AN3CA	BOLT
1	1		AN4CSA	BOLT
1	1	1	NAS1149C0463R	WASHER (AN960C416)
80	80	42	NAS1149C0332R	WASHER (AN960C10L)
2	2	2	CCR264SS3-3	RIVET
2	2	2	CR3212-4-03	RIVET
		1	MS27039C4-06	SCREW

GENERAL NOTES:

1. MATERIAL: N/A
2. FINISH:

ON -041/-043: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIOR TO INSTALLING D3282-041 WEB PRIME (REF. 4.2.1.3.3) OUTSIDE ONLY AND PAINT WHITE PER DART QSI 005 4.2 BLACK ANTI-SKID PAINT AS INDICATED TO 0.5" ABOVE LOCATION RIDGE PER DART QSI 005 4.4

ON -045: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIOR TO INSTALLING D3282-041 WEB PRIME (REF. 4.2.1.3.3) INSIDE AND OUTSIDE PER QSI 005 4.2.1 PAINT BLACK PER QSI 005 4.2.2 USING CAB213/F37038 CAMOFLAGE BLACK PER MIL-PRF-05285E TYPE I CLASS H. BLACK ANTI-SKID PAINT AS INDICATED TO 0.5" ABOVE LOCATION RIDGE PER DART QSI 005 4.4

3. TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.

4. UNITS: INCHES UNLESS OTHERWISE NOTED

5. BREAK SHARP EDGES 0.005 TO 0.010 MAX

6. IDENTIFICATION: N/A

7. WEIGHT: FOR -041/-043 = 37.5 LBS

FOR -045 = 33.4 LBS

8. WELDING TO BE DONE PER DART QSI 004.

9. ALL HOLES DRILLED ON CENTERLINES.

10. DAMAGE TOLERANCE ON FWD BEND:

THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 7 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020" DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.

11. BOND D3282-041 FLOAT WEB INTO D3274-1/3 OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291 ADHESIVE PER DART QSI 015. ENSURE HOLES LINE-UP.

12. DRILL Ø0.297 HOLES FOR ALS7-1032-130 INSERTS USING DT3274-1T2 BEFORE FINISH. INSTALL ALS7-1032-130 INSERTS AFTER FINISH. SEAL WEARSHOE BOLTS WITH SIKAFLEX -241/291. ON -045, DO NOT DRILL HOLES OR INSTALL INSERTS FOR LONG WEARPLATES.

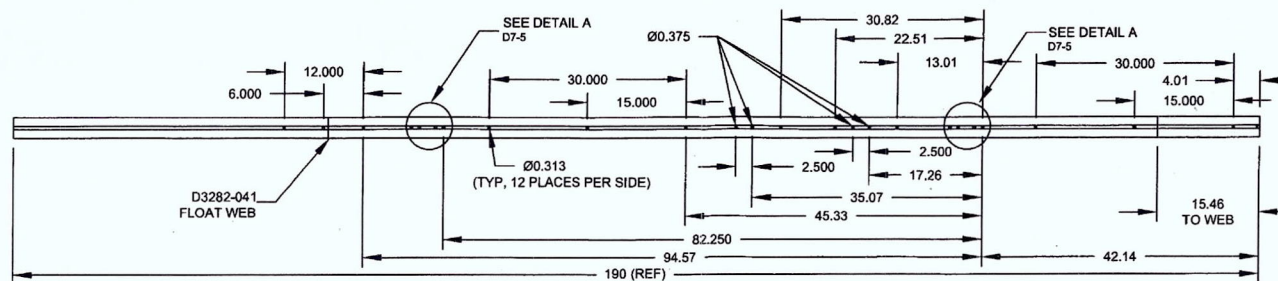
13. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY. CLEAN EXCESS GREASE WITH WASH 'N WIPE DEGREASER.

14. ON -045, APPLY COAT OF ROCKGUARD TO SKIDTUBE WHERE WEARPADS ARE INSTALLED.

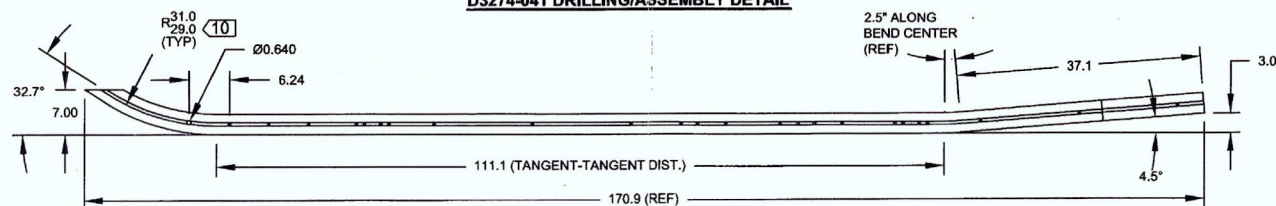
SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 167711-A
UW 17/11/6

G	ADD -045 CONFIGURATION (FOR PHI) ZN A5-4, A5-6 REVISE NOTE 2, 7 & 12, ADD NOTE 14 (ZN A8-1)	DS	16.04.25
F	REVISE NOTE 2: ADD ANTI-SKID PAINT, REMOVE GASKETS PER IIN-D206-642 REV Q	DB	14.04.15
E	REVISE NOTE 2: FINISH NOW PRIME/PAINT WAS POWDERCOAT, REF. PAR13-256	DW	13.05.17
D	NEW INSERTS, SS WEARSHOE + GASKET	CP	06.12.19
C	ADD -043; NEW INSERTS	CP	05.03.16
B	MOVE SADDLE HOLE: 42.14 WAS 42.76	CP	04.08.09
A	NEW ISSUE	CP	04.03.15
REV.	DESCRIPTION	BY	DATE
DESIGN	CP	DART AEROSPACE USA, INC EUGENE, OR	
DRAWN	RF		
CHECKED	AK	DRAWING NO.	REV. G
MFG. APPR.	JLM	D3274	SHEET 1 OF 6
APPROVED	DS	TITLE	SCALE
DE APPR.		SKIDTUBE ASSEMBLY	NTS
DATE	16.04.25	COPYRIGHT © 2004 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR TRANSMITTED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

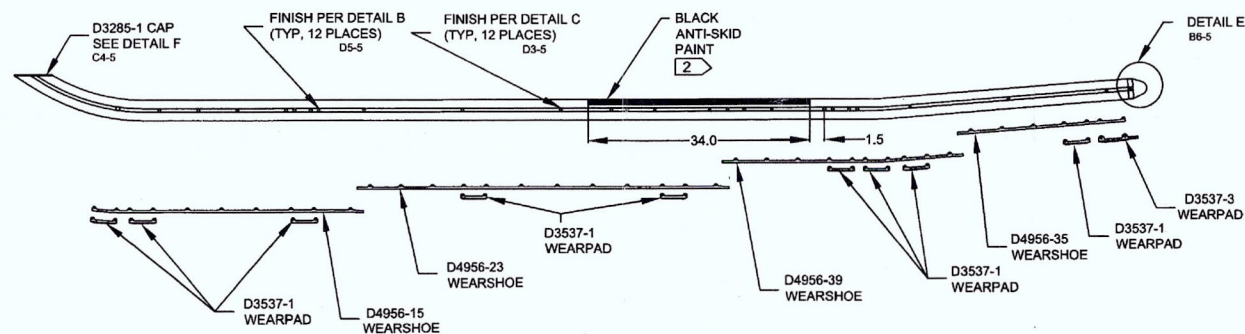
RELEASED
2016-07-26
ECN 16-616



D3274-041 DRILLING/ASSEMBLY DETAIL



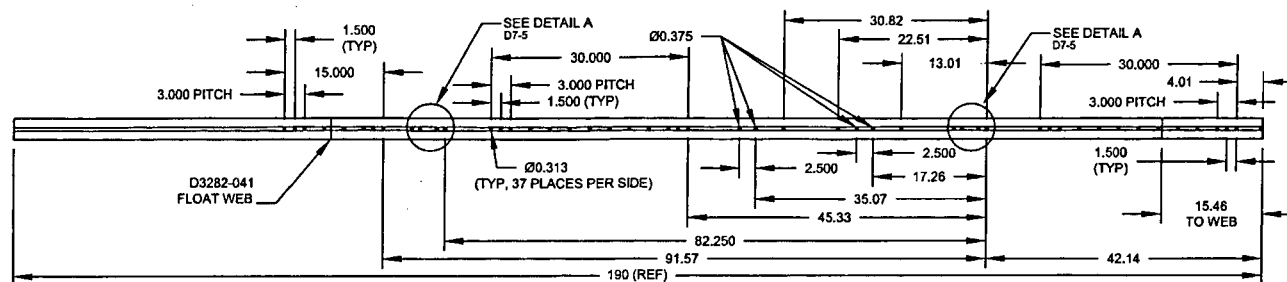
D3274-041 BEND/DRILLING DETAIL



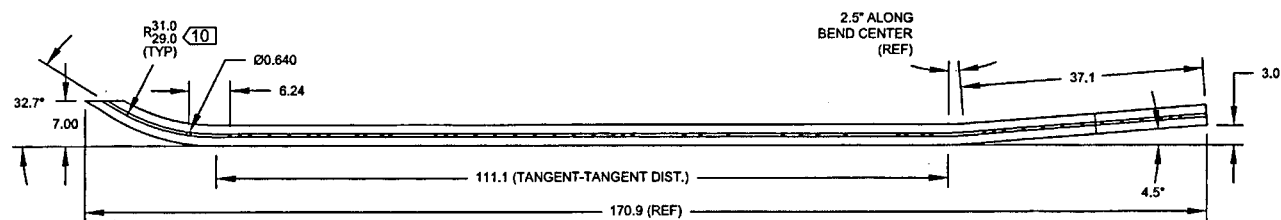
**D3274-041 SKIDTUBE ASSEMBLY
(SEE DETAIL D FOR WEARSHOE INSTALLATION)**

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2016-07-26

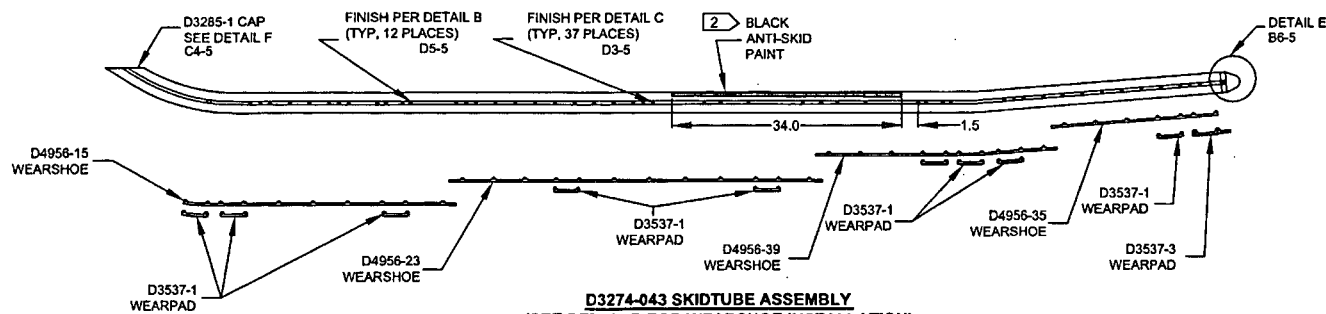
DESIGN	CP	DART AEROSPACE USA, INC	
DRAWN	RF	EUGENE, OR	
CHECKED	AK	DRAWING NO.	REV. G
MFG. APPR.	JLM	D3274	SHEET 2 OF 6
APPROVED	DS	TITLE	SCALE
DE APPR.		SKIDTUBE ASSEMBLY	NTS
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D3274-043 DRILLING/ASSEMBLY DETAIL



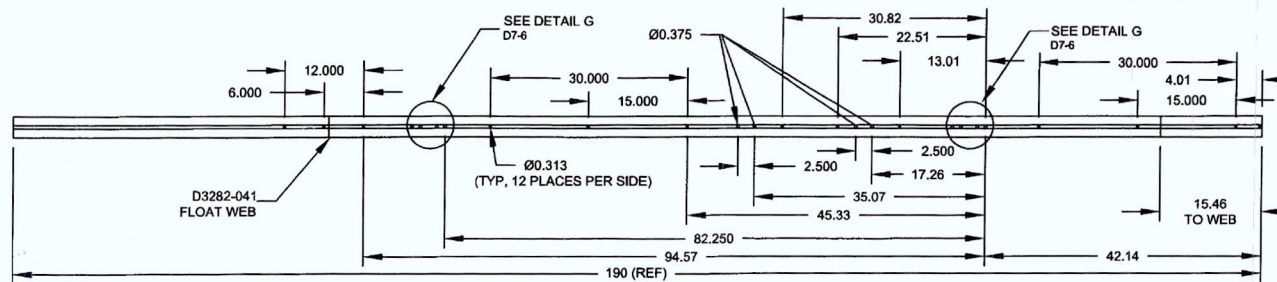
D3274-043 BEND/DRILLING DETAIL



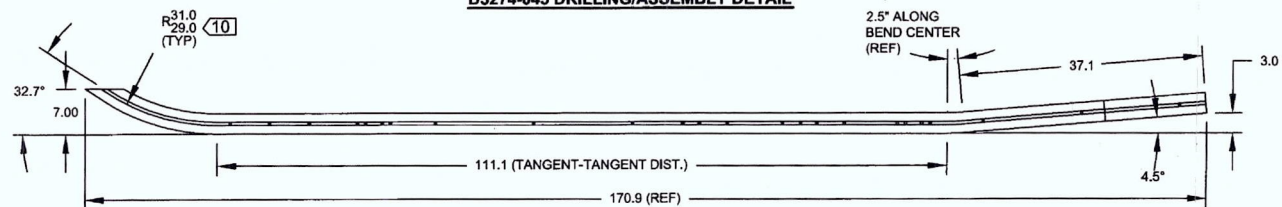
**D3274-043 SKIDTUBE ASSEMBLY
(SEE DETAIL D FOR WEARSHOE INSTALLATION)**

RELEASE
2016-07-26

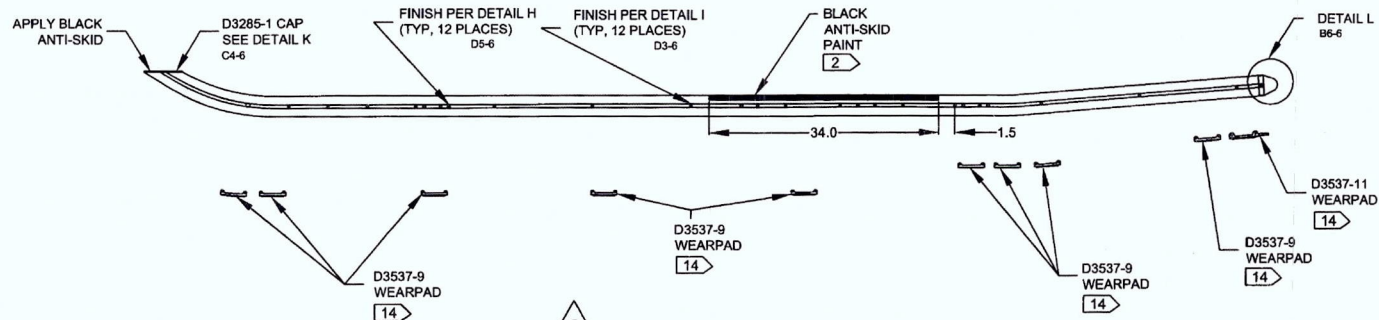
DESIGN	CP	DART AEROSPACE USA, INC	
DRAWN	RF	EUGENE, OR	
CHECKED	AK	DRAWING NO.	REV. G
MFG. APPR.	JLM	D3274	SHEET 3 OF 6
APPROVED	DS	TITLE	SCALE
DE APPR.	11	SKIDTUBE ASSEMBLY	NTS
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D3274-045 DRILLING/ASSEMBLY DETAIL



D3274-045 BEND/DRILLING DETAIL



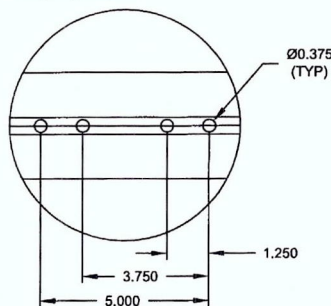
D3274-045 SKIDTUBE ASSEMBLY
(SEE DETAIL J FOR WEARSHOE INSTALLATION)

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2016-07-26

DESIGN	CP	DART AEROSPACE USA, INC	
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CHECKED	AK	DRAWING NO.	REV. G
MFG. APPR.	JLM	D3274	SHEET 4 OF 6
APPROVED	DS	TITLE	SCALE
DE APPR.		SKIDTUBE ASSEMBLY	NTS
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DETAIL A: DRILL DETAIL

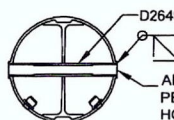
D6-2, D3-2, D5-3, D3-3



DETAIL B

B6-2, B5-3

FOR Ø0.375 HOLES ONLY



D2649 SPACER

AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.375
HOLES ONLY:
1. CHAMFER HOLE 0.030x45°
2. INSERT D2649 SPACER
3. WELD INTO PLACE AND GRIND FLUSH
4. C'BORE TO Ø0.313x0.75 DEEP

DETAIL C

B5-2, B4-3

FOR Ø0.313 HOLES ONLY



D3275-1 SPACER

CHAMFER 0.030x45°
(TYP)

DETAIL D

A4-2, A4-3



ALS7-1032-130 INSERT (1)
AN3C4A BOLT (1)
NAS1149C0332R WASHER (1)
(78 PLACES)

WEARSHOE/WEARPAD (REF)



DETAIL F: END FINISHING DETAIL

B7-2, B7-3

CCR264SS3-3 RIVETS (2 PLACES)

AN4C5A BOLT (1)

NAS1149C0463R WASHER (1)

INSTALL WITH SIKAFLEX-241/-291

CR3212-4-03 RIVETS (2 PLACES)

D3415-041 NUT PLATE,
LPS HARDCOAT ON EXTERIOR

D3413-1 RING

D3285-1 CAP (REF)

1/16

1.0
REMOVE RIDGE
ON INSIDE OF
SKIDTUBE LEAVE
0.070 MIN.

ORIENTATION
OF D3415-041

DETAIL F NOTES

1. CUT TUBE LEVEL
 2. REMOVE RIDGE ON FWD SIDE
 3. LOCATE D3285-1 (TRIM AS NECESSARY)
 4. WELD D3285-1 IN PLACE PER DART QSI 004
 5. GRIND FLUSH
 6. RIVET D3415-041 NUT PLATE IN PLACE
- NOTE: MASK THREADS IN D3415-041
PRIOR TO FINISH

DETAIL E

B2-2, B2-3

D2646 CAP
SEAL WITH
SIKAFLEX-241/291
ADHESIVE

AN3C4A BOLT (1)
NAS1149C0332R WASHER (1)
D3672-1 WASHER (1)
(2 PLACES)
INSTALL WITH SIKAFLEX-241/-291

Ø0.208 (2 PLACES)
DRILL PRIOR TO INSTALLING
D2646 CAP

BORE OUT END OF SKIDTUBE
TO 0.75 DEPTH AND 0.070 WALL

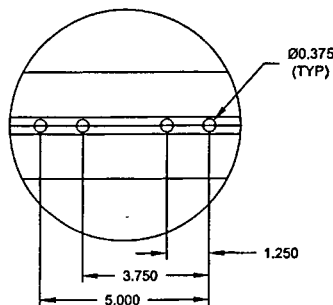
0.400

-041/-043 DETAILS

RELEASED
2016-07-26

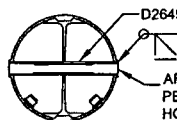
DESIGN		CP	DART AEROSPACE USA, INC	
DRAWN		RF	EUGENE, OR	
CHECKED		AK	DRAWING NO.	REV. G
MFG. APPR.		JLM	D3274	SHEET 5 OF 6
APPROVED		DS	TITLE	SCALE
DE APPR.			SKIDTUBE ASSEMBLY	NTS
DATE		16.04.25	COPYRIGHT © 2004 BY DART AEROSPACE USA, INC	
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DETAIL G: DRILL DETAIL
D6-4, D3-4



DETAIL H
B6-4

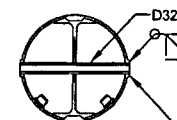
FOR Ø0.375 HOLES ONLY



AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.375
HOLES ONLY:
1. CHAMFER HOLE 0.030x45°
2. INSERT D2649 SPACER
3. WELD INTO PLACE AND GRIND FLUSH
4. C'BORE TO Ø0.313x0.75 DEEP

DETAIL I
B5-4

FOR Ø0.313 HOLES ONLY



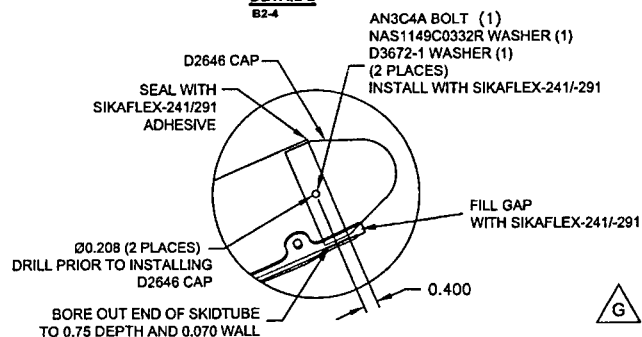
CHAMFER 0.030x45°
(TYP)

DETAIL J
A4-4



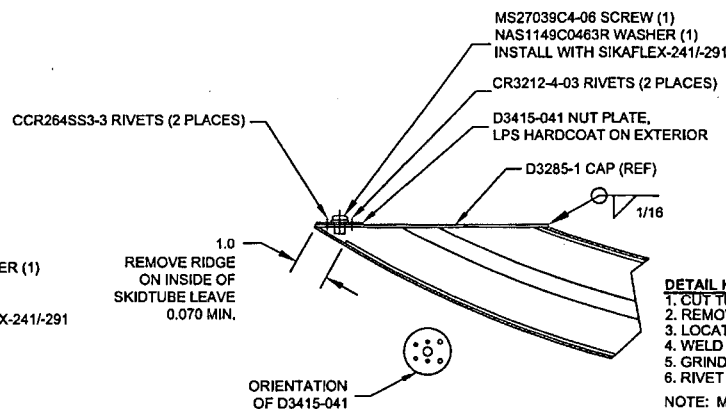
ALS7-1032-130 INSERT (1)
AN3C4A BOLT (1)
NAS1149C0332R WASHER (1)
(40 PLACES)
WEARPAD (REF)

DETAIL L
B2-4



AN3C4A BOLT (1)
NAS1149C0332R WASHER (1)
D3672-1 WASHER (1)
(2 PLACES)
INSTALL WITH SIKAFLEX-241/291

DETAIL K: END FINISHING DETAIL
B7-4



DETAIL K NOTES
1. CUT TUBE LEVEL
2. REMOVE RIDGE ON FWD SIDE
3. LOCATE D3285-1 (TRIM AS NECESSARY)
4. WELD D3285-1 IN PLACE PER DART QSI 004
5. GRIND FLUSH
6. RIVET D3415-041 NUT PLATE IN PLACE
NOTE: MASK THREADS IN D3415-041
PRIOR TO FINISH

G -045 DETAILS

RELEASED
2016-07-26

DESIGN	CP	DART AEROSPACE USA, INC	
DRAWN	RF	EUGENE, OR	
CHECKED	AK	DRAWING NO.	REV. G
MFG. APPR.	JLM	D3274	SHEET 6 OF 6
APPROVED	DS	TITLE	SCALE
DE APPR.		SKIDTUBE ASSEMBLY	NTS
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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: <u>167711-A</u> Part No. <u>D206-642-541</u> NCR No. _____		DISPOSITION Rework ☐ Scrap ☒ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%;"> <tr> <td>Skid-tube ☒</td> <td>Cross tube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☒	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																	
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Date: <u>18-05-14</u>		Step #: <u>190</u>		QTY Effective: <u>1</u>		MRB (QSI042) Approval DAS 9 9-89 <u>18-05-15</u>																																																																			
Description Work Order Deviation Nick/Dent found on Ridge of tube was found. During removal too much Ridge was removed to pass inspection				Disposition Scrap destroy no replace		Completed By JTW 18-05-15																																																																			
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